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INSTITUTE FOR DEFENSE ANALYSES

**Field Action Officer Roles
in GCCS Development**

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19980303 090

October 1997

Approved for public release;
distribution unlimited.

IDA Document D-2023

Log: H 97-001856

DTIC QUALITY INSPECTED 3

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PREFACE

This paper is submitted under the IDA task entitled "Command, Control, and Communication Systems Assessment." It documents the evolutionary acquisition approach to GCCS, the requirements determination method, how each phase is planned via the Evolutionary Phase Implementation Plan (EPIP), and the central role of the field action officer in the process.

CONTENTS

Preface.....	iii
Summary	S-1
Evolutionary Approach	1
Requirements Process	2
Evolutionary Phase Implementation Plan	3
1. Development and Training	4
2. Fielding.....	4
3. Field Roles.....	5
Glossary	G-1

SUMMARY

This document describes the acquisition approach being taken to field the Global Command and Control System (GCCS). This specific approach to *evolutionary acquisition* represents the Department of Defense's attempt at fielding a major computer system outside of the existing rigid and lengthy acquisition process. It has evolved from DoD's initiative for acquisition reform in the 1980s wherein the Department has attempted to introduce a number of business practices and processes found in the private sector. The primary goal is to make the acquisition process more responsive and more efficient through institutional mechanisms for dealing with the rapidly changing technologies found in the computer industry. The purpose is to keep DoD computer systems modern enough to fully harness the power of the latest technological advances in computers and to meet the rapidly changing needs of a wide range of users.

To meet these demands, DoD has created a requirements process that is flexible yet firm enough for effective planning. Important parts of this new requirements process are the Evolutionary Phase Implementation Plan (EPIP) and the Requirements Implementation Document (RID). The EPIP is a "contract" among the GCCS community that describes the next version of GCCS. A RID lists user requirements and how they will be met by GCCS.

Testing and evaluation are also strongly influenced by the fluid requirements and rapid fielding of systems. Although still in flux, testing in general is conducted by DISA to examine the deltas that each upgrade to GCCS offers, as opposed to a more time-consuming reexamination of the entire system.

Finally, fielding is accomplished by coordinating DISA with CINC, Service, and Agency action officers. Field action officers participate in DISA training and subsequently train the operators and users in their commands. In addition, field action officers are responsible for deficiency reporting via the GCCS Software Problem Report feature of the Help Desk. New processes to ensure that training, installation, and user feedback are timely and heeded are under consideration.

FIELD ACTION OFFICER ROLES IN GCCS DEVELOPMENT

This document describes the acquisition approach being taken to field the Global Command and Control System (GCCS). It explains the evolutionary acquisition approach to GCCS, how GCCS requirements are determined, how each phase of development is planned via the Evolutionary Phase Implementation Plan, and how GCCS software is developed, tested, and fielded. The final section describes the role of the field action officer in the process, which includes nominating requirements to J-33, conducting operational testing and evaluation, and fielding issues such as installation, training, and deficiency reports.

EVOLUTIONARY APPROACH

The Global Command and Control System is being developed using an *evolutionary acquisition* strategy; there is no grand design for the system. Instead, additional functionality and capabilities are being added over time on a step-by-step basis. To illustrate, a basic version of the top secret system (GCCS(T)) will be fielded in June 1997, with JOPES functionality, GSORTS, AIRFIELD, COP, and e-mail. The follow-on version (GCCS(T2)) will also include JPET with a new version of TARGET, a new version of JFRG, Netmeeting, and limited SIOP capability. Releases beyond these two will expand upon such capabilities as SIOP and SCI information exchange and include an electronic whiteboard.

Each release expands capabilities and interoperability while retaining many of the software and hardware features common to previous releases—essentially a continuous, slow upgrade of GCCS designed not to overwhelm the operator. In the future, there will be periodic additional releases as needs and technical capabilities continue to evolve. This approach of making periodic incremental changes is an attempt to keep GCCS responsive to rapidly changing technology, and to be responsive to CINC, Service, and Agency (CSA) requirements. The main procedural steps in the evolutionary development process are defining and prioritizing requirements, development and testing, and fielding.

REQUIREMENTS PROCESS

GCCS development is driven by the requirements and priorities of field commanders. No fixed, master set of requirements has been defined in an Operational Requirements Document (ORD). Instead, requirements are regularly identified and validated by CSAs. The process for nominating and validating GCCS requirements is set forth in CJCSM 6721.01 and described below. Those requirements that will be addressed during a GCCS incremental phase are formalized in a Requirements Implementation Document (RID).

The role of the requirements process in the overall development process is illustrated in Figure 1. CINCs, Services, and Agencies nominate joint requirements that are collected in the J3 GCCS Requirements Database (GRiD). Nominated requirements are categorized and then assigned for validation to the appropriate Requirements Working Group (these groups are defined by CJCSI 6721.01 and contain representatives from the CSAs). Once a working group has validated a set of functional requirements, it develops a RID as the formal documentation of need. The GCC Review Board (chaired by Vice Director J-6) reviews the RID and, based on technical challenges, schedules, and resources, sets priorities and decides when to implement the new functionality/capabilities. For functionality/capabilities identified by the Review Board for implementation in upcoming GCCS releases, an Evolutionary Phase Implementation Plan (EPIP) is developed. And finally, based on the EPIP, implementation is undertaken and products tested and fielded.

The J-33 within the Joint Staff is the office of primary responsibility for defining and prioritizing requirements. For each phase the J-33 takes requirements from working group RIDs and combines them into a RID for use in EPIP development. This consolidated RID describes the vision, current operational capability, threat, current shortcomings, new required capabilities, integrated logistics support, infrastructure support and inter-operability, and fielding locations. CSAs who are proponents of a GCCS functionality should submit a description of their requirements to J-33 for inclusion in the GRiD, and then assign a representative to the responsible Requirements Working Group.

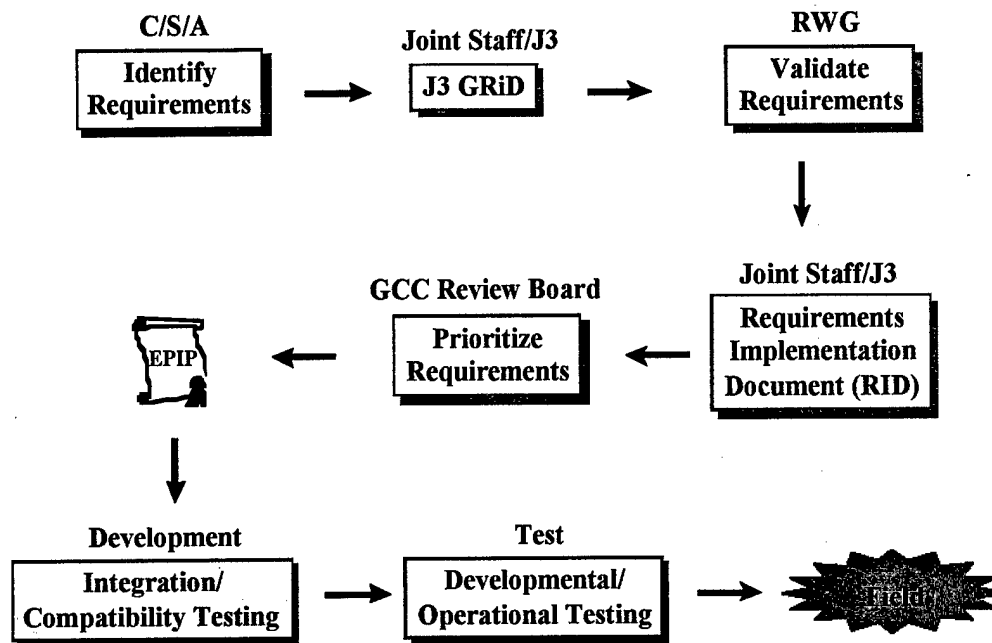


Figure 1. GCCS Requirements to Fielding

EVOLUTIONARY PHASE IMPLEMENTATION PLAN

The EPIP is a “contract” among the CSAs that documents requirements to be addressed in a GCCS development phase, details where the responsibility will lie for financing and developing these requirements, and affirms how the results will be tested and fielded. Its primary purpose is to provide a common understanding for all the organizations that must work together to successfully deploy GCCS. Experience with the early deployment phases of GCCS has proven that close teamwork, a common understanding of tasks, and realistic expectations among all participants are essential features of the evolutionary development process. The EPIP is the mechanism for accomplishing these goals.

The EPIP provides a management framework that forms the basis for broader decisions concerning development and deployment of new joint C2 functionality and capabilities. As such, it is the means for meeting DoD and congressional oversight requirements in a concise, consolidated document. It constitutes a tailored interpretation of the DoD R-5000 acquisition regulations and is much more flexible and responsive than previous methods of acquiring large automated information systems.

The EPIP contains all of the information necessary to carry out the development, testing, and fielding of a GCCS incremental phase. It is a restatement of the requirements to be met during the phase, the technical solutions to be pursued, and the developer(s) to be involved. Other parts of the EPIP include a test annex containing the specific testing requirements for the phase; cost, performance, and schedule to meet the requirements as part of an evolutionary acquisition program baseline; security requirements and solutions; integrated logistics support and training plans; and resources (funding).

The Defense Information Systems Agency (DISA) is responsible for preparing the EPIP. This work is supported by appropriate CSAs. An EPIP is approved by both the ASD(C3I) and the J3. This approval mechanism replaces the formal milestone review process. The EPIP preparation and approval process significantly streamlines the oversight of the program relative to the traditional, formal process.

1. Development and Testing

The overall integrator for GCCS is DISA. D-2 and D-6 oversee the development of the Common Operational Environment (COE) and ensure that functional software is properly integrated. Individual applications (and components of the COE)—Air Force CTAPS or the Navy METOC programs, for example—are developed by the CSAs.

Testing includes developmental testing, which is the responsibility of DISA. In addition, operational testing is performed as appropriate. Operational testing entails only testing changes made to the baseline system of record.

2. Fielding

Fielding is managed by DISA in coordination with CSA action officers. Fielding entails three main activities: training, installation, and the reporting of problems. Training is provided by DISA. Field action officers participate in DISA training, and they must train the operators and users within their commands. Installation is done by both DISA and Service installation teams. Deficiency reporting is another key element of fielding an evolutionary program. Field action officers are expected to report problems and deficiencies through the GCCS Software Problem Report (GSPR) feature of the Help Desk, as appropriate.

3. Field Roles

The evolutionary acquisition process requires teamwork between developers and users at every stage. Field action officers are expected to play several active roles. Recapping the description outlined in the preceding sections, these roles are as follows:

Defining and prioritizing requirements

- Nominating requirements to J-33

- Participating in RWGs

- Supporting GCC Review Board deliberations

Testing and evaluation

- Supporting operational testing as needed

Fielding

- Participating in training and informing command of capabilities

- Assisting in or performing installation

- Providing feedback in trouble reports

GLOSSARY

ASD	Assistant Secretary of Defense
C2	Command and Control
C3I	Command, Control, Communications, and Intelligence
CINC	Commander in Chief
CJCSI	Chairman of the Joint Chiefs of Staff Instruction
CJCSM	Chairman of the Joint Chiefs of Staff Manual
CSA	CINCs, Service, and Agencies
COE	Common Operational Environment
COP	Common Operational Picture
CTAPS	Contingency Theater Automated Planning System
DISA	Defense Information Systems Agency
DoD	Department of Defense
EPIP	Evolutionary Phase Implementation Plan
GCCS	Global Command and Control System
GRiD	GCCS Requirements Database
GSORTS	GCCS Status of Resources and Training System
GSPR	GCCS Software Problem Report
IDA	Institute for Defense Analyses
JFRG	Joint Forces Requirement Generator
JOPES	Joint Operations Planning and Execution System
JPET	Joint Planning and Execution Toolkit
METOC	Meteorological and Oceanographic
ORD	Operational Requirements Document
RID	Requirements Implementation Document
RWG	Requirements Working Group
SCI	Special Compartmented Information
SIOP	Single Integrated Operations Plan
TARGET	Theater Analysis and Replanning Graphical Execution Toolkit

REPORT DOCUMENTATION PAGE*Form Approved*
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE October 1997	3. REPORT TYPE AND DATES COVERED Final	
4. TITLE AND SUBTITLE Field Action Officer Roles in GCCS Development			5. FUNDING NUMBERS C-DASW01-94-C-0054 TA-T-J6-1492	
6. AUTHOR(S) Johnathan A. Wallis, David R. Graham, Richard H. White				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Institute for Defense Analyses 1801 N. Beauregard Street Alexandria, VA 22311-1772			8. PERFORMING ORGANIZATION REPORT NUMBER IDA Document D-2023	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Office of the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence The Pentagon Washington, DC 20301			10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited.			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) This document describes the purpose of the RID and the EPIP documents stemming from the acquisition approach taken to field the Global Command and Control System (GCCS). It briefly explains the evolutionary acquisition approach to GCCS, how GCCS requirements are determined, how each phase of development is planned via the EPIP, and how GCCS software is developed, tested, and fielded. The final section identifies responsibilities for the EPIP implementation.				
14. SUBJECT TERMS GCCS, Global Command and Control System, evolutionary acquisition, RID, Requirements Implementation Document, EPIP, Evolutionary Phased Implementation Plan			15. NUMBER OF PAGES 10	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT UL	